

**SEQUENCES FOR IMPROVING THE EFFICIENCY OF SECRETION OF  
NON-SECRETED PROTEINS FROM MAMMALIAN AND INSECT CELLS**

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a continuation-in-part of U.S. Patent Application Serial  
No. 09/136,421, filed August 20, 1998, <sup>NOW USPN 6,037,150</sup> which in turn claims priority to U.S.  
Provisional Application Serial No. 60/056,871 filed August 21, 1997, both of  
which are incorporated herein by reference in their entirety.

**BACKGROUND OF THE INVENTION**

**FIELD OF THE INVENTION**

The present invention relates to the engineering of heterologous gene  
constructs by recombinant DNA techniques for the more efficient processing and  
secretion of heterologous genes in mammalian and insect cells. Particularly the  
present invention relates to the use of secretion competent polypeptides linked in  
frame with a non-secretion competent polypeptide to direct the secretion of the  
non-secretion competent polypeptide.

**DESCRIPTION OF THE RELATED ART**

Recombinant polypeptides for medical, research and veterinary  
applications are produced using a wide variety of genetically engineered  
organisms that include transgenic animals (eg. cows, goats) transgenic plants (eg.  
canola) recombinant viruses (eg. baculoviruses) and transformed prokaryotic cells  
(eg. bacteria) and eukaryotic cells (eg. yeast and animal cells) in culture.